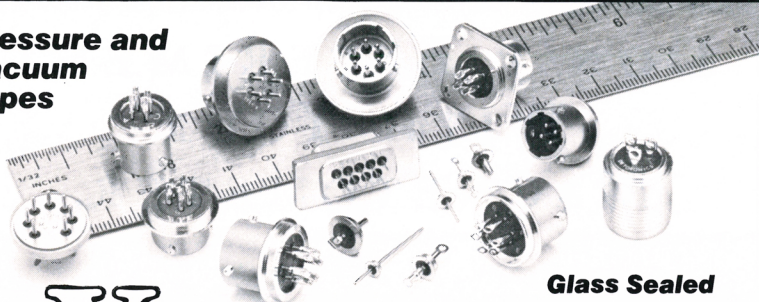


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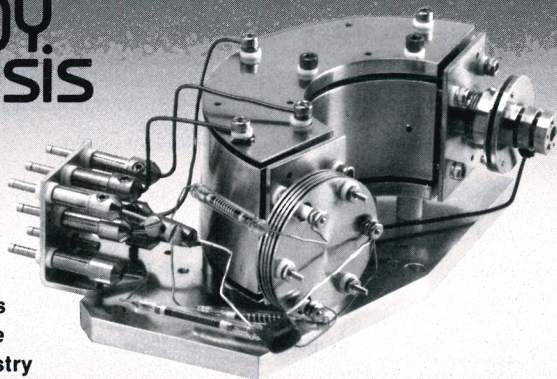
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states with angular momentum.

Carlos contributed, either in person or through the many institutions he helped create, to the upbringing of a whole generation of Latin American physicists, who will always remember him with respect and affection.

►RODOLFO GAMBINI

*Universidad de la República
Montevideo, Uruguay*

►JORGE PULLIN

*Pennsylvania State University
University Park*

Allen Montgomery Peterson

Allen Montgomery Peterson, a professor emeritus of electrical engineering at Stanford University and for the past four decades a prolific and innovative contributor to diverse aspects of commercial, environmental and national defense developments, died of a massive heart attack on 17 August.

Peterson was born in Santa Clara, California, on 22 May 1922. He served in the Army Air Force during World War II. He received his BS (1948), MS (1949) and PhD (1952) degrees in electrical engineering from Stanford. He rose to the rank of professor at Stanford in 1961 and became emeritus in 1992.

Starting about 1964 Peterson held dual positions at the university and at the Stanford Research Institute, where he was a senior scientific adviser. At SRI, Peterson was the key person in initiating and building up what became the Radio Physics Laboratory and the Communications Laboratory. At the university Peterson developed and taught courses on radar systems, digital signal processing, microprocessors, logic design and digital filters.

With students and colleagues, Peterson initiated several significant areas of research, including radar oceanography and radar-acoustic sounding of the atmosphere. His dissertation studies and later research evolved into the over-the-horizon radar systems that were installed in the US and the Soviet Union for early warning of ballistic missile attack. His work in the 1950s on radar reflections from the trails produced by meteors helped initiate applications to communications and basic studies of the upper atmosphere. He was active in ionospheric and auroral studies during the International Geophysical Year (1957-58). The innovative method Peterson invented for sounding the atmosphere with a combination of acoustic and radar waves led to commercial systems and stimulated international applications of this method of environ-

mental and weather measurement. He also helped start the disciplines of radar oceanography and radar astronomy, which provided new methods to study the oceans and the solar system.

Commercial applications of digital systems developed by Peterson and his students include a widely applied filter bank for transferring between time- and frequency-division multiplex signals in telecommunications systems; worldwide sales of this and similar devices were on the order of a billion dollars during the mid 1980s. Related studies at Stanford led to an early concept for a million-channel receiver for the national program called the Search for Extraterrestrial Intelligence. At the time of his death, Peterson was working with a former student on a technique for vastly reducing the power consumption of electronic chips.

For decades up to the time of his death, Peterson was involved with several Silicon Valley start-up companies, with the Department of Defense and with other government agencies. Since 1961 he had been a member of the Jason group of about 50 academics who meet yearly to advise the Secretary of Defense on scientific matters related to national defense. He was a member of the White House Science Council on Space Defense (related to the Strategic Defense Initiative), the National Research Council Board on Army Science and Technology, the Naval Strategies Board, the Air Force Studies Board, the Voice of America Broadcast Engineering Advisory Committee and the Jet Propulsion Laboratory Advisory Council.

Peterson served as a consultant to a number of companies and to the President's Science Advisory Committee, the Defense Atomic Support Agency, the Defense Advanced Research Projects Agency, the Institute for Defense Analysis, the Office of Telecommunications and the Office of the Secretary of Defense. He served for a time as the chief scientist of the technical research group of the Science Applications International Corporation. He had a long-term association with the Geophysical Institute of the University of Alaska and caused a "northern exposure" fracas when his radar studies of the aurora led to an account in a local newspaper that he planned to turn off the northern lights.

Allen Peterson touched the lives of numerous students, colleagues and friends throughout the world. He will be sorely missed by all.

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